WHAT IS CLAIMED IS:

1. A sector drive unit for a camera comprising:

a base plate provided with an aperture;

one or more sectors for opening and closing the aperture;

an electromagnetic actuator for driving the sectors to open and close the aperture; and

a driving force transmitting mechanism for transmitting a driving force of the electromagnetic actuator to the sectors and converting a prescribed amount of angular movement of the electromagnetic actuator into a sufficient amount of movement to drive the sectors from one of an aperture-opening position and an aperture-closing position to the other of the aperture-opening position and an aperture-closing position.

2. A sector drive unit for a camera according to claim 1; wherein the electromagnetic actuator comprises a pulse motor which undergoes the prescribed amount of angular movement in response to application thereto of a prescribed number of voltage or current pulses for driving the sectors to either the aperture-opening position or the aperture-closing position depending upon the polarity of the pulses.

3. A sector drive unit for a camera according to claim 2; wherein the prescribed number of voltage or current pulses comprises one voltage or current pulse.

4. A sector drive unit for a camera according to claim 2; wherein the pulse motor comprises a rotor having a plurality of magnetic poles, a stator having a plurality of magnetic poles, and a drive coil for driving the rotor, an angle of rotation of the rotor in response to application of one voltage or current pulse to the drive coil being defined by a relationship between positions of the magnetic poles of the rotor and positions of the magnetic poles provided on the stator.

5. A sector drive unit for a camera according to claim 4; wherein the positions of the magnetic poles provided on the stator are static stable positions at which the rotor is retained without the supply of power to the drive coil.

6. A sector drive unit for a camera according to claim 1; wherein the driving force transmitting mechanism comprises a drive gear provided on a drive shaft of the electromagnetic actuator and a sector drive gear driven by the driving gear for driving the sectors.

7. A sector drive unit for a camera according to claim 1; further comprising a sector urging spring provided on the driving force transmitting mechanism or on a sector for urging the sectors in one of the aperture-opening direction and the aperture-closing direction.

8. A sector drive unit for a camera according to claim 1; further comprising a case removably mounted to the base plate

and containing therein the electromagnetic actuator and the driving force transmitting mechanism.

9. A sector drive unit for a camera according to claim 1; further comprising a sector position detecting unit for detecting when the sectors are in at least one of the aperture-opening position and the aperture-closing position.

10. A sector drive unit for a camera according to claim 9; wherein the sector position detecting unit comprises a conductive spring element having a portion that undergoes movement with the driving force transmitting mechanism to come into and out of contact with a conductive member.

11. A sector drive unit for a camera according to claim 1; wherein the one or more sectors comprise a plurality of sectors each having a sector arm connected thereto, and the sector arms are interconnected to cooperatively drive the sectors to open and close the aperture.

12. A sector drive unit for a camera comprising:

a sector unit having a base plate provided with an aperture, one or more sectors movably mounted adjacent to the aperture for opening and closing the aperture, and a sector arm for driving the one or more sectors to open and close the aperture; and

a sector driving unit having an electromagnetic actuator and a driving force transmitting mechanism for

converting a rotary driving force of the electromagnetic actuator into movement of the sector arm.

13. A sector drive unit for a camera according to claim 12; wherein the one or more sectors comprise a plurality of sectors each having a sector arm connected thereto, and the sector arms are interconnected to cooperatively drive the sectors to open and close the aperture.

14. A sector drive unit for a camera according to claim 12; wherein the sector driving unit further comprises a case removably mountable to the base plate for housing the electromagnetic actuator and the driving force transmitting mechanism.

15. A sector drive unit for a camera according to claim 12; wherein the sector driving unit further comprises a sector position detecting unit for detecting a position of the one or more sectors.

16. A sector drive unit for a camera according to claim 15; wherein the sector position detecting unit comprises a conductive spring element having a portion that undergoes movement with the driving force transmitting mechanism to come into and out of contact with a conductive member.

17. A sector drive unit for a camera according to claim 11; wherein the driving force transmitting mechanism converts a prescribed amount of angular movement of the

electromagnetic actuator into an amount of angular movement of the sectors sufficient to drive the sectors from one of an aperture-opening position and an aperture-closing position to the other of the aperture-opening position and the aperture-closing position.

18. A sector drive unit for a camera according to claim 17; wherein the electromagnetic actuator comprises a pulse motor which undergoes the prescribed amount of angular movement in response to application thereto of a prescribed number of voltage or current pulses for driving the sectors to either the aperture-opening position or the aperture-closing position depending upon the polarity of the pulses.

19. A sector drive unit for a camera according to claim 18; wherein the prescribed number of voltage or current pulses comprises one voltage or current pulse.

20. A sector drive unit for a camera according to claim 18; wherein the pulse motor comprises a rotor having a plurality of magnetic poles, a stator having a plurality of magnetic poles, and a drive coil for driving the rotor, an angle of rotation of the rotor in response to application of a voltage or current pulse to the drive coil being defined by a relationship between positions of the magnetic poles of the rotor and positions of the magnetic poles provided on the stator.

21. A sector drive unit for a camera according to claim 20; wherein the positions of the magnetic poles provided on the stator are static stable positions at which the rotor is retained without the supply of power to the drive coil.

22. A sector drive unit for a camera according to claim 12; wherein the driving force transmitting mechanism comprises a drive gear provided on a drive shaft of the electromagnetic actuator and a sector drive gear for driving the sectors.

23. A sector drive unit for a camera according to claim 12; further comprising a sector urging spring provided on the driving force transmitting mechanism or on a sector for urging the sectors in one of the aperture-opening direction and the aperture-closing direction.